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ORCHID STUDIES, III

BY

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ADDITIONS TO THE GENUS *Dendrochilum* BLUME IN THE PHILIPPINE ISLANDS

Dendrochilum (Subg. *Platyclinis*) ***cucullatum***
(*Ames*) *Pfitzer* in Engl., Pflanzenr. IV. 50. II. B. 7.
(1907) 98, fig. 38J; *Ames*, Orch. 2 (1908) 12, 115, t. 24,
fig. III, 3; *Ames*, Orch. 5 (1915) 56; *Ames* in Merrill,
Enum. Philipp. Fl. Pl. 1 (1924) 293.

Acoridium cucullatum *Ames* in Proc. Biol. Soc. Wash.
19 (1906) 153.

Dendrochilum cucullatum had not appeared in collec-
tions, until recently, since Copeland's original collection
in 1904. Through the kindness of Dr. Eduardo Quisum-
bing, of the Bureau of Science, Manila, several excellent
specimens of this plant have been received for determi-
nation.

MINDANAO: Mt. Matutum, Cotabato Province, April 1932, *Ramos*
& *Edaño* Bur. Sci. Nos. 85428, 85431, 85444, 85459 and 85466
(Specimens in Herb. Ames and in Herb. Bur. Sci., Manila).

Dendrochilum (Subg. *Platyclinis*) ***filiforme***
Lindl. var. ***Ramosii*** (*Ames*) *L. O. Williams*, comb. nov.

Dendrochilum Ramosii *Ames* in Philipp. Journ. Sci.
8 (1913) Bot. 410.

A recent study of additional material of *D. Ramosii* indicates that it is only varietally distinct from *D. filiforme* Lindl.

Dendrochilum (Subg. *Platyclinis*) **rotundilabium**
L. O. Williams, n. sp.

Herba epiphytica, usque ad 1 dm. alta. Pseudobulbi ovoidei vel fusiformes, sulcati, aggregati. Folia elliptica, acuta, 5–7-nervia. Bracteae inflorescentiae rotundato-ovatae, multinerviae. Sepalum dorsale oblongo-ellipticum, obtusum, uninervium. Sepala lateralia anguste ovata, acuta, uninervia. Petala oblongo-elliptica ad oblongo-lanceolata, obtusa vel acuta, uninervia. Labelum integrum vel margine paulo serrulatum, rotundum, ecallosum, basi paulo saccatum. Columna subgeneris.

An epiphytic herb up to about 1 dm. tall. Pseudobulbs ovoid or fusiform, sulcate (when dry), aggregated, covered with fibrous sheaths, 6–8 mm. long, 3–4 mm. thick when dry. Leaves elliptic, acute, 4–10 cm. long, 5–13 mm. broad; the blade with 5–7 prominent lateral veins, the outer pair on the margin of the blade giving a marginate appearance. Flowering peduncle slender, 6–9 cm. long; the distichous raceme dense, few-flowered, 1.5–2 cm. long, the alternate flowers mostly 1–1.5 mm. apart. Bracts of the inflorescence rotund-ovate, many-nerved, about 2.5–3 mm. long and about as broad, exceeding the pedicel and ovary in length. Dorsal sepal oblong-elliptic, obtuse, 1-nerved, about 3 mm. long and 1.5 mm. broad. Lateral sepals narrowly ovate, acute, 1-nerved, 2.5–3 mm. long and 1.2–1.8 mm. broad. Petals oblong-elliptical to oblong-lanceolate, obtuse or acute, 1-nerved, 2.5–3 mm. long, 1–1.2 mm. broad. Lip entire, the margin sometimes minutely serrulate, rotund, ecallose, slightly saccate at the base, usually 3-nerved, about 2.5 mm. long and as broad. Column only slightly

or not at all arcuate, about 1.5 mm. long; rostellum ovate, thin; clinandrium truncate, slightly denticulate.

LUZON: summit of Mt. Botianay, Camarines Sur, alt. 3000 ft., Nov. 2, 1928, *Edaño 75798* (in Herb. Bur. Sci., Manila); in forest, summit of Mt. Madooy, alt. 2000 ft., Nov. 9, 1928, *Edaño 78814* (TYPE in Herb. Ames No. 43824); in forest, summit of Mt. Madooy, alt. 2000 ft., Nov. 10, 1928, *Edaño 75832*.

As the genus is now delimited, *Dendrochilum rotundilabium* is one of the smallest, if not the smallest, species in the Philippines and has no near allies. It is easily distinguished from all other species by the small size of the plant, the orbicular lip and the position of the stelidia on the column.

Dendrochilum (Subg. *Platyclinis*) **serratum** L.
O. Williams, nom. nov.

Dendrochilum grandiflorum Schltr. in Fedde Repert.
Sp. Nov. 8 (1910) 563, non J.J.Sm. 1904.

The origin of this species has been obscure since its publication. Schlechter received the plant under an incorrect name and with incorrect data. He suggested that it might be a native of the Philippine Islands. This suggestion has proved to be correct. The following collections may be referred to this species.

LUZON: Batingtingan, Rizal Province, April 1915, *Loher 12981*; Rizal Province, Sept. 1909, *Loher 14571*; Mt. Lumutan, Province of Rizal, April 1923, *Ramos 42324 & 42325*.

NEGROS: Dumaguete, Cuernos Mts., Prov. Negros Oriental, April 1908, *Elmer 9909*.

UNLOCALIZED: "Philippinen? Von Sander importiert, wahrscheinlich von Micholitz eingesandt." (Fragment of type and analytical drawings prepared by Schlechter).

Dendrochilum (Subg. *Platyclinis*) **unicallosum**
L. O. Williams, n. sp.

Herba epiphytica, usque ad 2.5 dm. alta. Pseudobulbi fusiformes, sulcati, aggregati. Folia elliptico-lanceolata, obtusa vel acuta. Inflorescentia multiflora, bractee orbiculares. Sepalum dorsale anguste elliptico-lanceolatum, acutum, trinervium. Sepala lateralalia late lanceolata, acuta, trinervia. Petala oblanceolata, acuta vel obtusa, paulo denticulata, trinervia. Labellum trilobatum; lobi laterales semiarcuati; lobus medius lanceolatus. Columna generis.

Pseudobulbs sulcate, fusiform, aggregated, covered or sheathed with fibrous maculate sheaths, 2.2–4 cm. long, 0.2–0.6 cm. thick when dry. Leaves elliptic-lanceolate, obtuse or acute, usually constricted near the apex, the blades often with one or two pairs of prominent lateral nerves but none marginate, 6–10 cm. long, 1–2 cm. broad. Peduncle slender, 15–25 cm. long. The distichous multiflorous raceme up to 15 cm. long, rather dense, the alternate flowers about 2 mm. apart. Bracts orbicular, about as long as or usually a little exceeding the ovary in length, 1.5–2 mm. long and as broad. Dorsal sepal narrowly elliptic-lanceolate, acute, 3-nerved, about 3.8 mm. long and 0.8 mm. broad. Lateral sepals broadly lanceolate, acute, 3-nerved, 3–3.2 mm. long, 1–1.3 mm. broad. Petals oblanceolate, acute or obtuse, slightly denticulate, 3-nerved, 2.6–3.1 mm. long, about 1 mm. broad. Lip 3-lobed, about 2 mm. long and 1.7 mm. broad; the lateral lobes semiarculate, usually obtuse, about 1 mm. long; middle lobe lanceolate, about 1 mm. long from the sinus of the lateral lobes,—with a large callus at the junction of the lip with the foot of the column and two carinae extending from the large callus to about opposite the sinuses of the lobes. Column of the subgenus, short, about 1.3 mm. long; the stelidia arising about opposite the stigma, semiovate; rostellum rather large, ligulate; clinandrium 3-dentate at the apex.

LUZON: Montalban, Prov. Rizal, May 1909, *Loher 12566*; Prov. Rizal, Sept. 1909, *Loher 14643* (TYPE in Herb. Ames No. 43749); on trees, mossy forest slopes, Mt. Irid, Prov. Rizal, Nov. 1926, *Ramos & Edaño 48450*.

This species resembles *Dendrochilum longispicatum* quite closely in aspect. The structure of the lip is different from that of every other species known to the author; and this difference, together with other characters, serves to distinguish it from its closest allies.

Dendrochilum* (Subg. *Platyclinis*) *yuccaefolium
L. O. Williams, n. sp.

Herba epiphytica, usque ad 35 cm. alta. Pseudobulbi anguste cylindracei, sulcati, aggregati. Folia linearia, acuta. Bracteae inflorescentiae oblongo-ovatae, acutae. Sepalum dorsale lineare, acutum. Sepala lateralibus linearibus, acuta. Petala linearia, integra, trinervia. Labellum oblongo-ovatum, integrum, denticulatum et raro cum lobis lateralibus parvis. Columna subgeneris.

Pseudobulbs narrowly cylindric, sulcate, tapering from the base to the apex, 4.5–5.5 cm. long, 5–10 mm. thick toward the base when dry; flowering pseudobulbs very much smaller and inconspicuous, covered with fibrous sheaths. Leaves linear, acute, tapering gradually to the petiole, margins inrolled, 17–30 cm. long, 9–13 mm. broad; leaves from the flowering pseudobulbs inconspicuous at the time of the flowering. Peduncles 10–17 cm. long, part above the sheaths floriferous. Raceme distichous, rather dense, the alternate flowers about 2.5 mm. apart. Bracts oblong-ovate, acute, strongly striated, about 5 mm. long and 2.5 mm. broad. Dorsal sepal linear, acute, 6.5–7 mm. long, 1–1.5 mm. broad. Lateral sepals linear, acute, 3-nerved, 6.5–7 mm. long, 1–1.5 mm. broad. Petals linear, acute, entire, 3-nerved, 5–6 mm. long, 0.8–1 mm. broad. Lip entire, denticulate or rarely with small

lateral lobes, oblong or oblong-ovate; with three longitudinal carinae, the lateral pair strongly raised. Column arcuate, winged to the apex, about 1.8 mm. long; the stelidia arising about opposite the stigma; rostellum not thickened, triangular; clinandrium 3-dentate at the apex.

LUZON: Montalban, Prov. Rizal, May 1909, *Loher s.n.* (Herb. Bur. Sci., Manila); Paningtingan, Montalban, without date, *Loher 13216* (TYPE in Herb. Ames No. 43855); Prov. Rizal, Sept. 1909, *Loher 14717*.

This species has no near allies in the Philippines. The peculiar structure of the leaves and the shape and size of the perianth segments render it an easily distinguished and distinctive species.

Dendrochilum yuccaefolium seems to be most nearly allied to *D. simile* Blume, a species not yet known from the Philippine Islands. From this species, our plant may be distinguished by its very different leaves and by the inflorescence, as well as by differences to be found in the flower.

MISCELLANEOUS ORCHIDS

Corybas laceratus *L. O. Williams, n.sp.*

Herba parva, terrestris, unifoliata. Folia ovato-cordata, acuminata, leviter crenulata vel integra. Inflorescentia uniflora. Bracteae anguste lineari-lanceolatae, acuminatae. Sepalum dorsale galeatum, obovato-ellipticum. Sepala lateralibus filiformia. Petala filiformia. Labellum trilobatum; lobi laterales leviter lacerati; lobus medius recurvatus, ovatus vel rotundus, apice leviter retuso, margine lacerato. Columna generis.

Small terrestrial herbs, the bulbs unknown. Stems up to 5 cm. tall, bearing a single leaf toward the summit. Leaves ovate-cordate, short-acuminate, somewhat crenulate or entire, thin, 1–2.5 cm. long, 0.7–1.5 cm. broad. Inflorescence 1-flowered. Bracts exceeding the ovary, narrowly linear-lanceolate, acuminate, about 8 mm. long. Dorsal sepal galeate, obovate-elliptic, obtuse, about 15 mm. long and 12 mm. broad. Lateral sepals filiform, about 5 mm. long. Petals filiform, about 14 mm. long. Lip 3-lobed, tubular at the base, the margins coherent; lateral lobes short, directed forward, slightly lacerated, about 3 mm. long and as broad; the middle lobe strongly recurved, oval or round, slightly retuse at the apex, the margins strongly lacerated, about 8 mm. long and nearly as broad. Column short, alate toward the apex.

LUZON: Prov. Rizal, Sept. 1909, *Loher 14673* (TYPE in Herb. Ames No. 44947).

Corybas laceratus is most closely allied to *C. Merrillii*, the only other species known to occur in the Philippines, from which it may be easily distinguished by the 3-lobed lip as well as by the lacerations on the lip.

A collection from Burgos, Ilocos Norte Province, Luzon, July 29, 1918, *Ramos 32880*, may be this species but the flowers are agglutinated and certain determination is not possible.

Aglossorrhyncha Schltr.

This genus now may be added to the known genera of Philippine orchids. The specimen on which the record is based bears only one flower, and that one is not complete. The plant is apparently an undescribed species but cannot be described on the basis of the available material.

BOHOL: on the trunk [of a tree] in the forest, Demyao (Dimiao?), flowers yellow, alt. 1000 ft., September 21, 1923, *Ramos s.n.*

Erythroides Merrillii Ames, Orch. 3 (1908) 79, t. 54; Ames, Orch. 5 (1915) 29; Ames in Merrill, Enum. Philipp. Fl. Pl. 1 (1924) 273.

Herpysma Merrillii Ames in Philipp. Journ. Sci. 2 (1907) Bot. 313; Schltr., Orchideen (1914) 118; J.J. Smith in Blumea 1 (1934) 213.

This interesting and rare plant is now known by a second collection from the Philippine Islands.

LUZON: Montalban, Prov. Rizal, April 1912, *Loher 13279*.

The generic status of this species has been in question since the time of its publication. Described in 1907 as an *Herpysma* without discussion, it was changed to *Erythroides* in 1908 by Ames and a good discussion of the species was given, stating reasons for the change. Schlechter referred to it under *Herpysma* in his Orchideen in 1914. In 1934, J.J. Smith had occasion to refer to it in connection with his paper "Artificial Key to the Orchid Genera of the Netherlands Indies, together with those of New Guinea, the Malay Peninsula and the Philippines" and referred the species to *Herpysma*. A short discussion of the status of the genus is given. Among others the following statement occurs, "It is not impossible that the very blunt anther forms a good generic character, as it is very different from the, so far as I know, always acuminate anther of the species of *Erythroides*." I have not seen specimens of *Herpysma longicaulis* Lindl., the generic type, but if plate 367 in Ann. Roy. Bot. Gard. Calcutta 8 (1898) is correct then the blunt anther shown is very different from the long acuminate one of *Erythroides Merrillii*. Ames' plate (Orch. 3 (1908) t. 54) shows the anther to be acute. The floral details of that plate were drawn from buds and according to new material the anther is longer, when mature, than is shown in the plate.

With due regard to the adnation of the lip with the column and the longitudinal carinae of the lip, characters assigned to the genus *Herpysma*, the present author believes that the plant in question should be referred to *Erythrodes*.

***Eulophia graminea* Lindl., Gen. & Sp. Orch. (1833) 182.**

Eulophia sinensis Miq. in Journ. Bot. Néerl. 1 (1861) 91.

Eulophia ramosa Hayata, Materials Fl. Formosa (1911) 332.

Merrill has given the range of this species (Sunyatsenia 1 (1930) 15) as "Assam to Ceylon, Burma and the Andaman Islands, Malay Peninsula to Singapore, Kwantung and Formosa." To the above range, the Philippines may now be added. The specimen at hand is leafless but according to a note by the collector, "la planta ahora no tiene hojas, solamente tallos florales," it is possible that he knew the plant to be leaf-bearing.

LUZON: San Fernando, Prov. Union, Dec. 15, 1918, *R. Lete* 467.

***Sarcochilus Carrii* L. O. Williams, nom. nov.**

Sarcochilus maculatus Carr in Gard. Bull. Str. Settlements 5 (1929) 26, t. 12, fig. A, non Benth. ex Pfitz. in Vergl. Morph. Orch. (1882) 15.

It is with pleasure that this orchid is renamed for Mr. Carr, who discovered it. With his untimely death a keen collector and critical observer of the orchid family was lost.

***Sarcochilus zamboangensis* Ames, Sched. Orch. No. 5 (1923) 39.**

A second collection of this little known plant extends its range to another island of the Philippine group.

BOHOL: on the slope of a hill in the forest, Bilar, alt. 2000 ft., September 13, 1923, flowers yellow, *Ramos 1814*.

Rhynchostylis densiflora (*Lindl.*) *L. O. Williams*, *comb. nov.*

Saccolabium densiflorum Lindl. in Wall. Cat. (1832) No. 7311; Lindl., Gen. & Sp. Orch. (1833) 220.

Saccolabium giganteum Lindl., in Wall. Cat. (1832) No. 7306.

Vanda densiflora Lindl. in Lindl. & Paxton, Fl. Gard. 2 (1851) 21, sub t. 42.

Anota densiflora Schltr., Die Orchideen (1914) 587, fig. 198.

J. J. Smith (*Blumea* 1 (1934) 215) has called attention to the fact that *Anota* Schltr. is of dubious generic worth and has pointed out that *Anota violacea* should be referred to the genus *Rhynchostylis*. With this interpretation I am in accord and should also place *Anota densiflora* in *Rhynchostylis*.

Arachnis Imthurnii (*Rolfe*) *L. O. Williams*, *comb. nov.*

Stauroopsis Imthurnii Rolfe in Bot. Mag. (1917) . 8714; Rolfe in Orch. Rev. 26 (1918) 149, 167.

A study of this species indicates that it should be referred to the genus *Arachnis*. The lateral lobes of the lip are entirely free from the column and the attachment at the base, in specimens which I have seen (probably from the type plant), is not so great as that shown in the above cited plate.

SOLOMON ISLANDS: large epiphyte of scandent habit, Maruto, Island of Isabel, alt. 285 m., Dec. 28, 1932, *Brass 3396*.

HORT.: Herb. Hort. Bot. Reg. Kew., Oct. 23, 1916. (Probably from type plant).

Sarcanthus utriculosus (*Ames*) *L. O. Williams*, *comb. nov.*

Camarotis utriculosa Ames, Orch. 5 (1915) 244.

This species, although referred by Ames to *Camarotis*, seems to be a member of the genus *Sarcanthus*. The rostellum is large but is hardly comparable to the rostellum in *Camarotis*. *Sarcanthus utriculosus* is closely allied to *Sarcanthus Merrillianus* Ames, a species native of Borneo.

The following collection of the species is the first record of the genus on Bohol.

BOHOL: on a citrus tree in the town, Batuan River, alt. 1000 ft., Sept. 5, 1922, *Ramos 2006*.

***Camarotis Loheri* L. O. Williams, n.sp.**

Herba epiphytica. Folia anguste-oblonga, obtusa, coriacea. Bracteae inflorescentiae leviter carinatae, obtusae, concavae. Sepalum dorsale oblongo-lanceolatum, leviter carinatum et naviculare. Sepala lateralia anguste-oblonga, obtusa, apice paulo obliqua. Petala lanceolata, acuta, paulo arcuata. Labellum trilobatum, apice abrupte conico-saccatum; lobi laterales erecti, elongati, carinati; lobus medius parvus, erectus, triangularis. Columna generis.

An epiphytic herb, the size unknown. Leaves narrowly oblong, obtuse, probably not oblique, coriaceous, about 7 cm. long and 1.5 cm. broad. Peduncle breaking through the leaf-sheath opposite the base of a leaf, exceeding the leaves in length, about 17 cm. long (only one seen), bearing 15–20 flowers. Bracts of the inflorescence somewhat carinate, obtuse, concave, about 2 mm. long. Dorsal sepal oblong-lanceolate, slightly carinate and navicular, about 10 mm. long and 4 mm. broad. Lateral sepals narrowly oblong, obtuse, slightly oblique at the apex, adnate to the column by their adjacent margins for about 2 mm., about 8 mm. long and 2.5–3 mm. broad. Petals lanceolate, acute, slightly arcuate, about 9 mm. long and

3 mm. broad. Lip 3-lobed, abruptly conic-saccate toward the apex, about 9 mm. long and 4.5 mm. deep through the sac; lateral lobes of the lip erect, extending from the base nearly to the apex of the lip, carinate; terminal lobe small, erect, triangular, about 1.5 mm. long; lower inner surface of the claw of the lip callose-thickened from the base up to the posterior wall of the sac; anterior wall of the sac with a retrorse, bifurcate, ligulate callus extending over the opening and nearly closing it; in the base of the sac is a longitudinal partition, extending about half way up, which divides the base of the sac into two parts. Column about 2 mm. long; the rostellum very much elongated and strongly sigmoid, about 8 mm. long.

LUZON: Prov. Rizal, Sept. 1909, *Loher s.n.* (TYPE in Herb. Ames No. 44387).

Camarotis Loheri is most closely allied to *C. philippinensis* Lindl., from which species it may be distinguished by the long ligulate, bifurcate callus on the anterior wall of the sac, by the less prominent lateral lobes of the lip, by the shape of the lip and the differently shaped conic sac, by the more prominent rostellum, by the partition in the sac and by the smaller size of the flowers as well as by the smaller leaves.

This species is the second *Camarotis* to be found in the Philippines,—*Camarotis utriculosa* being a species of *Sarcanthus*.

Camarotis Loheri is named in honor of Mr. August Loher, many years a resident of Manila, to whom we are indebted for many critical specimens of Philippine orchids collected in out-of-the-way places.